This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

LINES
COPY MARKS

IMAGES ARE BEST AVAILABLE COPY.

As rescanning documents *will not* correct images, please do not report the images to the Image Problem Mailbox.

Fig. 1

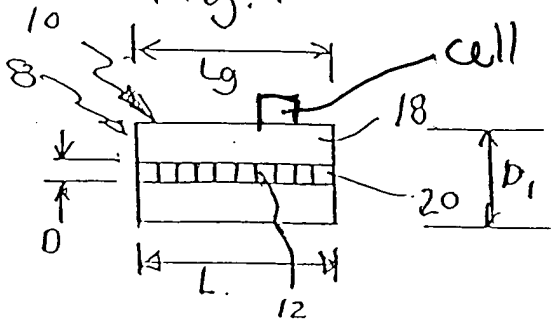
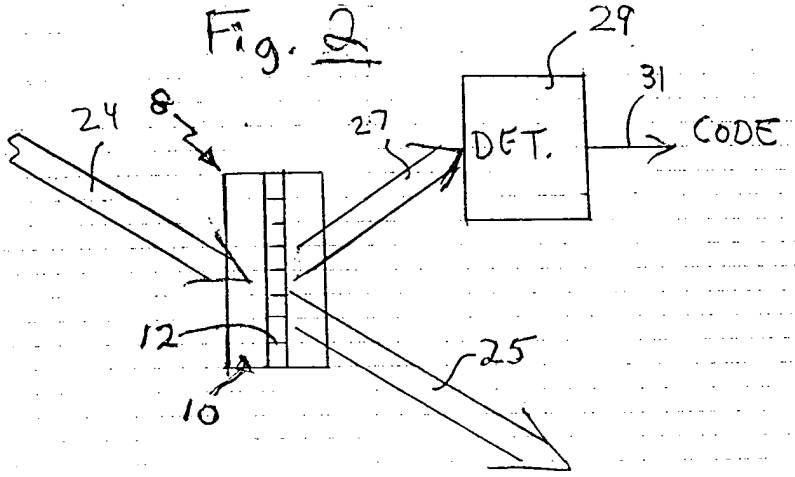


Fig. 2



CC-0653

Fig. 3

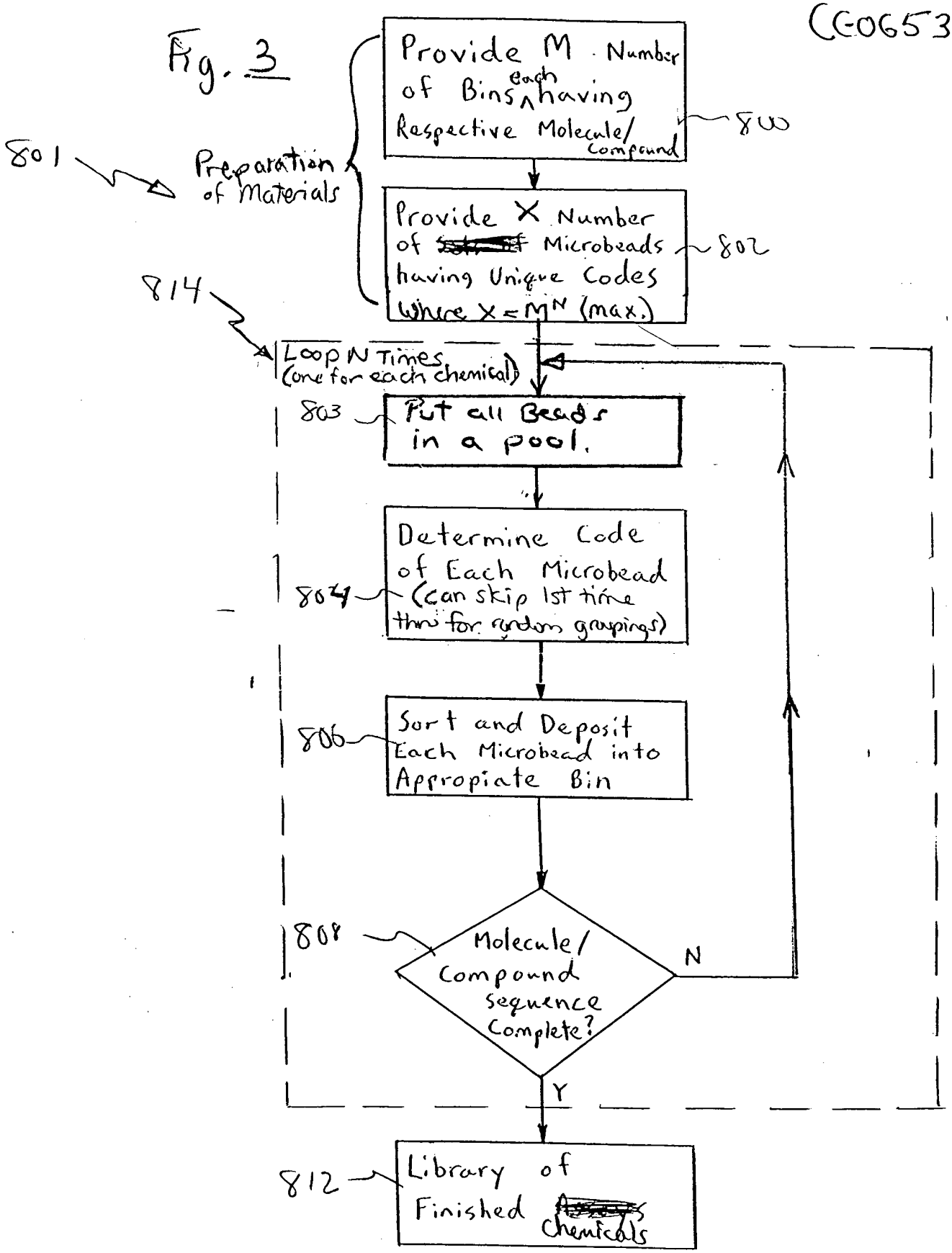

Provide M Number of Bins each having Respective Molecule/Compound
800
801
Preparation of Materials
Provide X Number of Microbeads having Unique Codes Where X = M^N (max.)
802
814
Loop N Times (one for each chemical)
803
Put all Beads in a pool.
Determine Code of Each Microbead (can skip 1st time thru for random groupings)
804
Sort and Deposit Each Microbead into Appropiate Bin
806
Molecule/Compound sequence Complete?
808
N
Y
Library of Finished Chemicals
812

Fig. 4

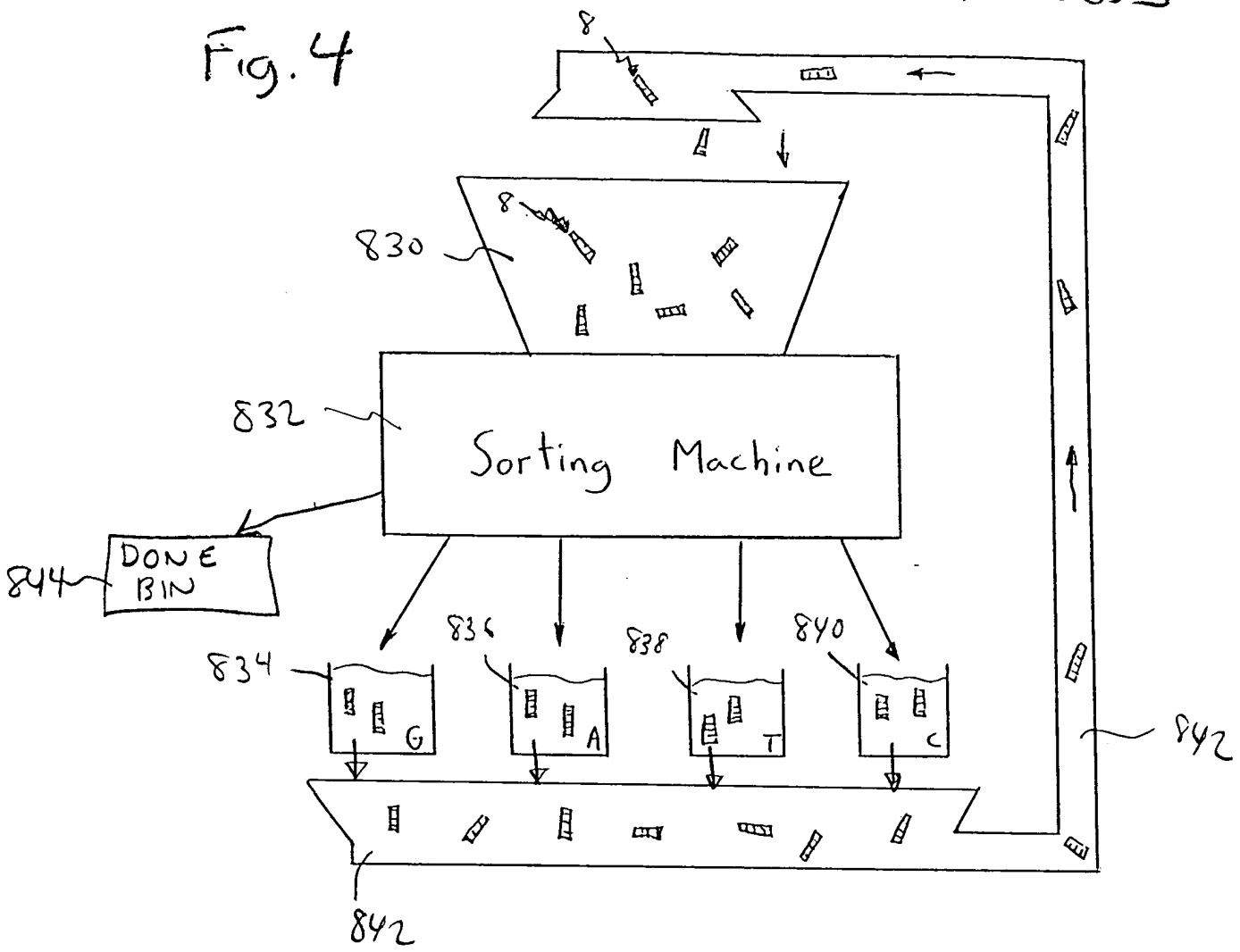
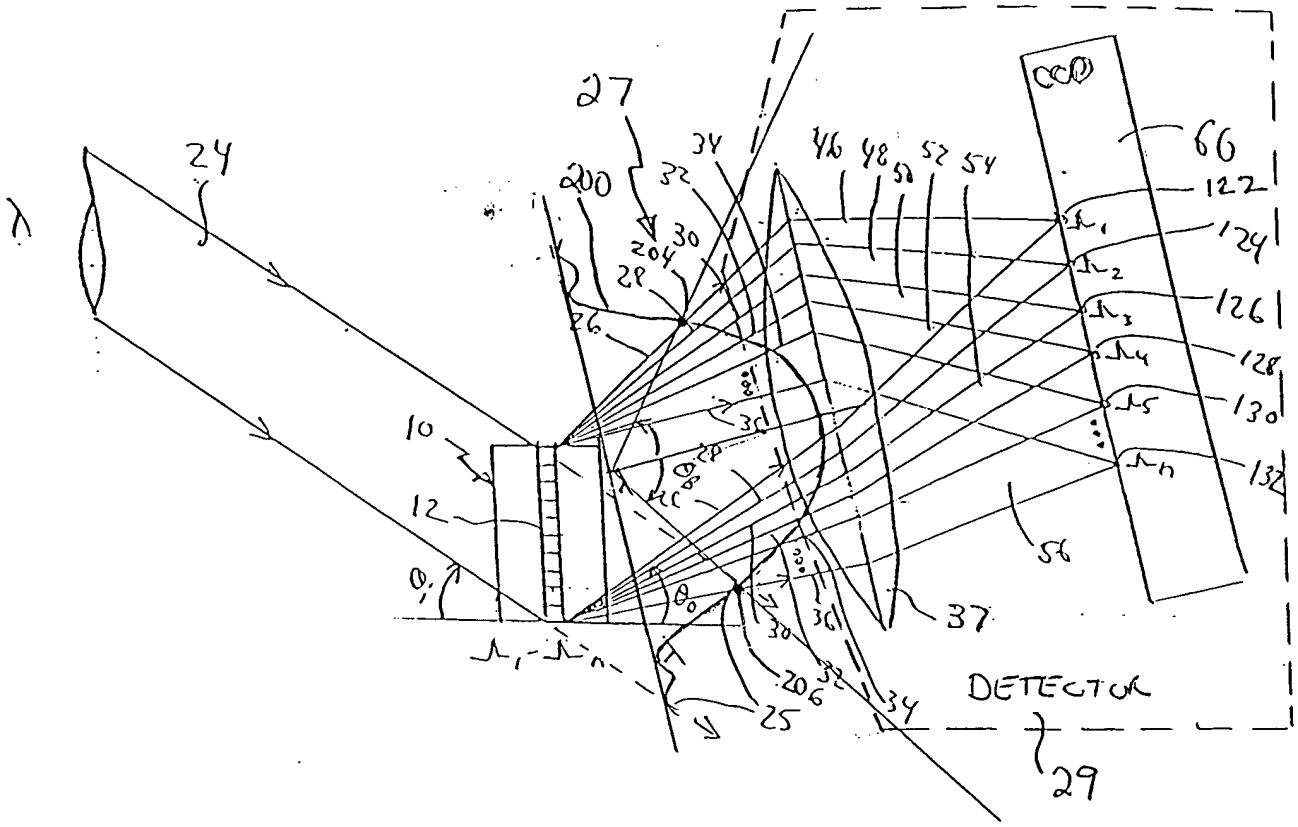

8
8
830
832
Sorting Machine
844
DONE BIN
834
836
838
840
G
A
T
C
842
842

Fig. 5

CC-0653



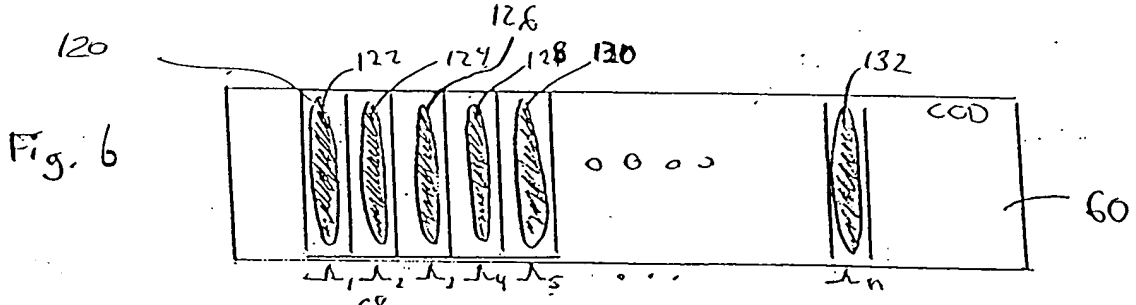


Fig. 6

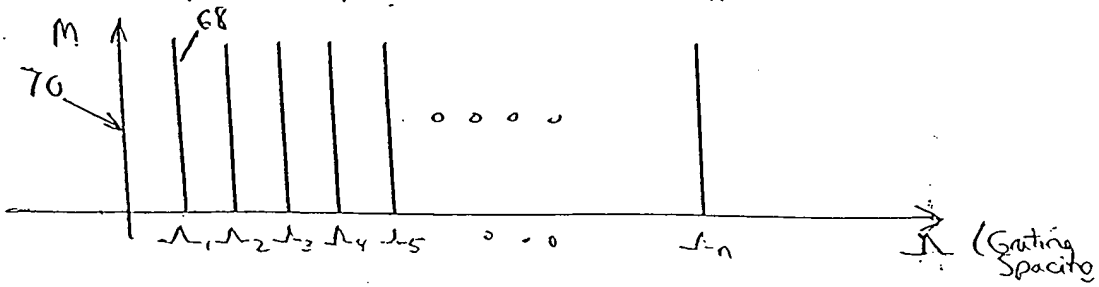


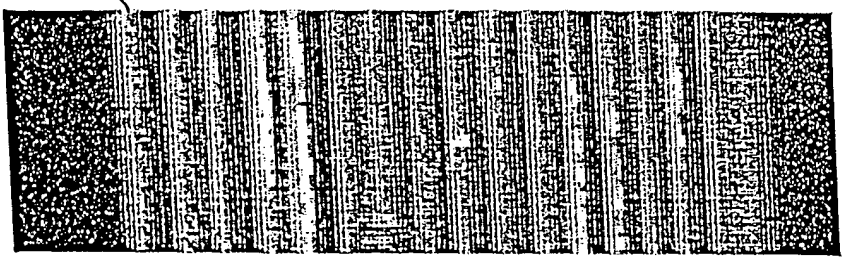
Fig. 7

Fig. 8

CC-0653

17 bits turned on

89

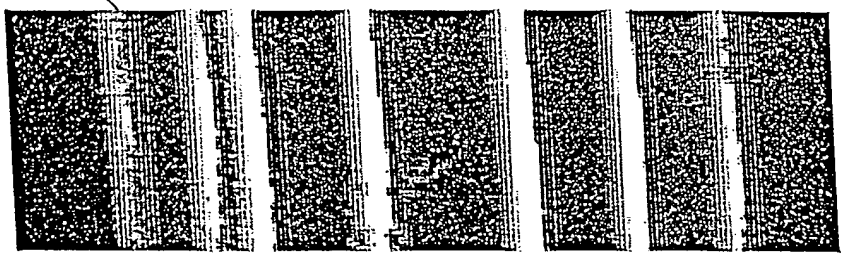


Bits: 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

(a)

7 bits turned on

89

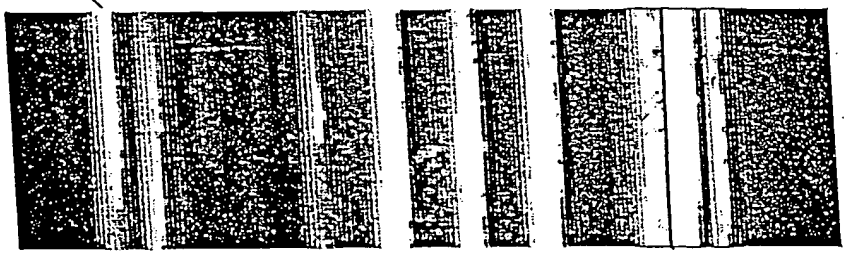


Bits: 1 0 1 1 0 0 1 0 0 0 1 0 0 1 0 0 1

(b)

9 bits turned on

89



Bits: 1 1 0 0 0 1 0 1 0 1 0 1 0 0 1 1 1

(c)

Fig. 9

CC-0653

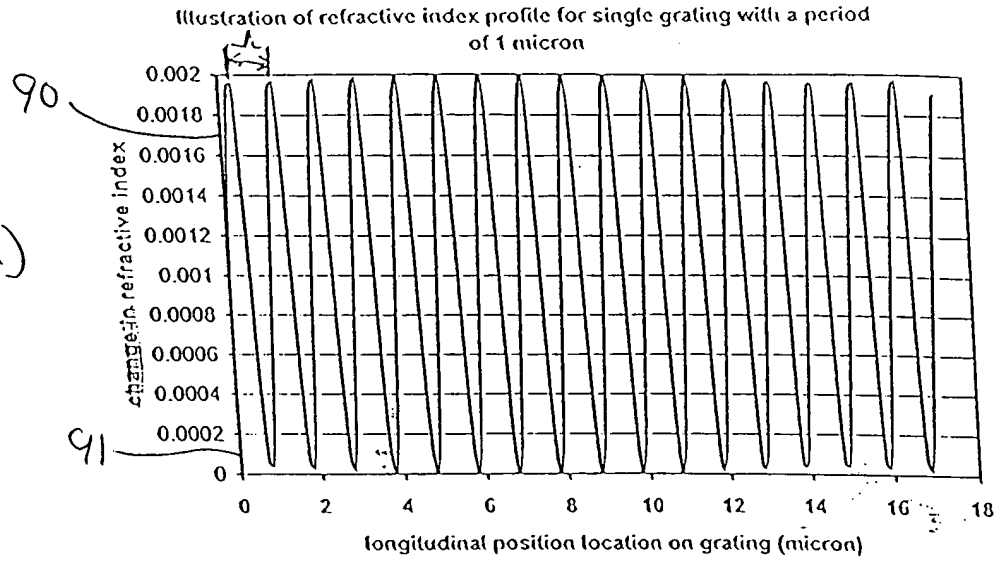


Illustration of refractive index profile for single grating with a period of 1 micron
90
91
(a)
change in refractive index
0.002
0.0018
0.0016
0.0014
0.0012
0.001
0.0008
0.0006
0.0004
0.0002
0
0 2 4 6 8 10 12 14 16 18
longitudinal position location on grating (micron)

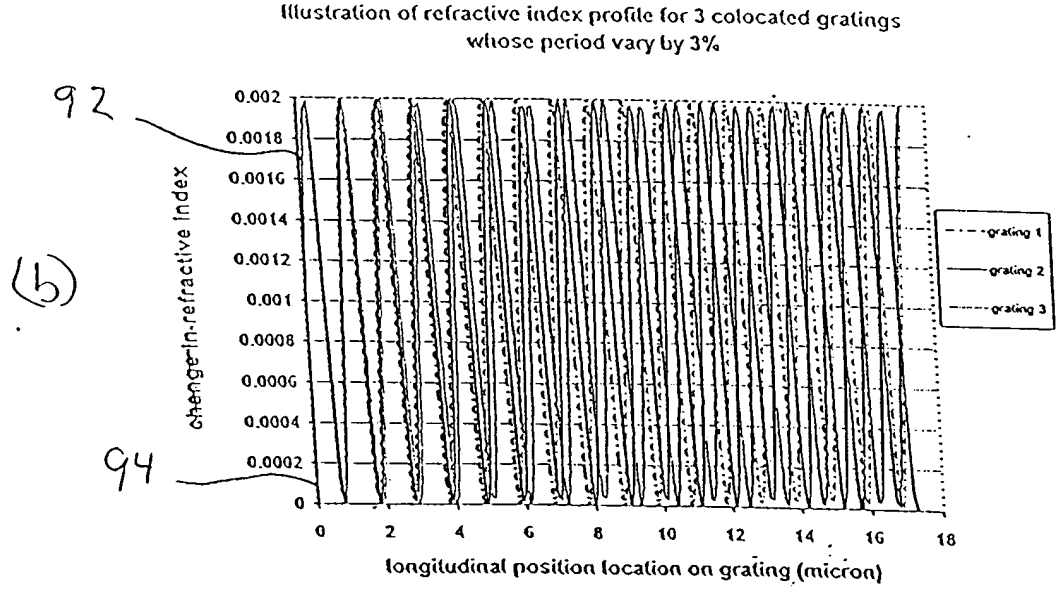


Illustration of refractive index profile for 3 colocated gratings whose period vary by 3%
92
94
(b)
change in refractive index
0.002
0.0018
0.0016
0.0014
0.0012
0.001
0.0008
0.0006
0.0004
0.0002
0
0 2 4 6 8 10 12 14 16 18
longitudinal position location on grating (micron)
grating 1
grating 2
grating 3

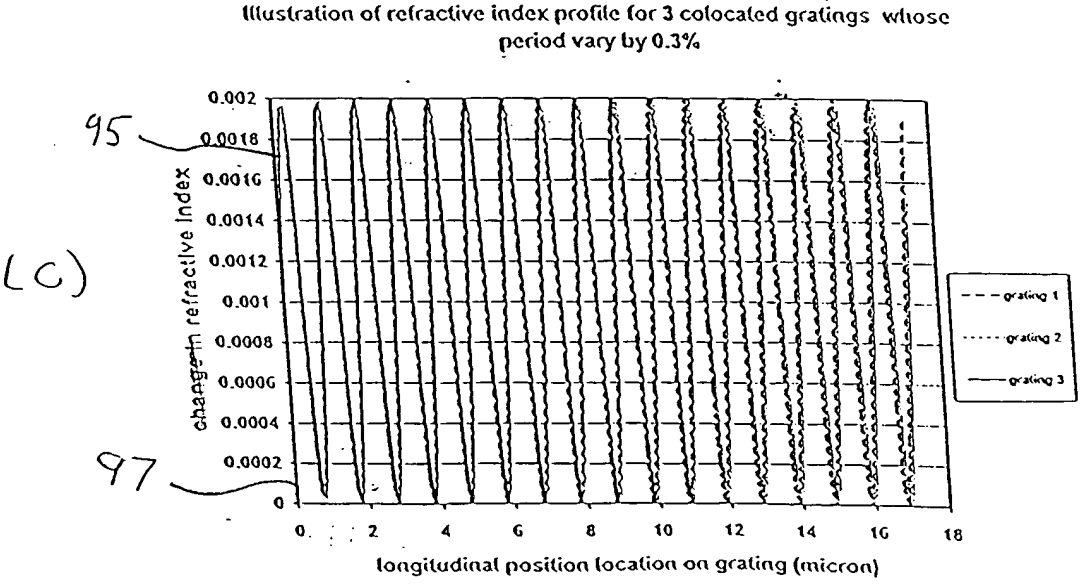


Illustration of refractive index profile for 3 colocated gratings whose period vary by 0.3%
95
97
(c)
change in refractive index
0.002
0.0018
0.0016
0.0014
0.0012
0.001
0.0008
0.0006
0.0004
0.0002
0
0 2 4 6 8 10 12 14 16 18
longitudinal position location on grating (micron)
grating 1
grating 2
grating 3

Fig. 9

(d)

CC-0653

Index modulation caused by superpostion of 3 gratings where the pitch between each grating varies by 3%.

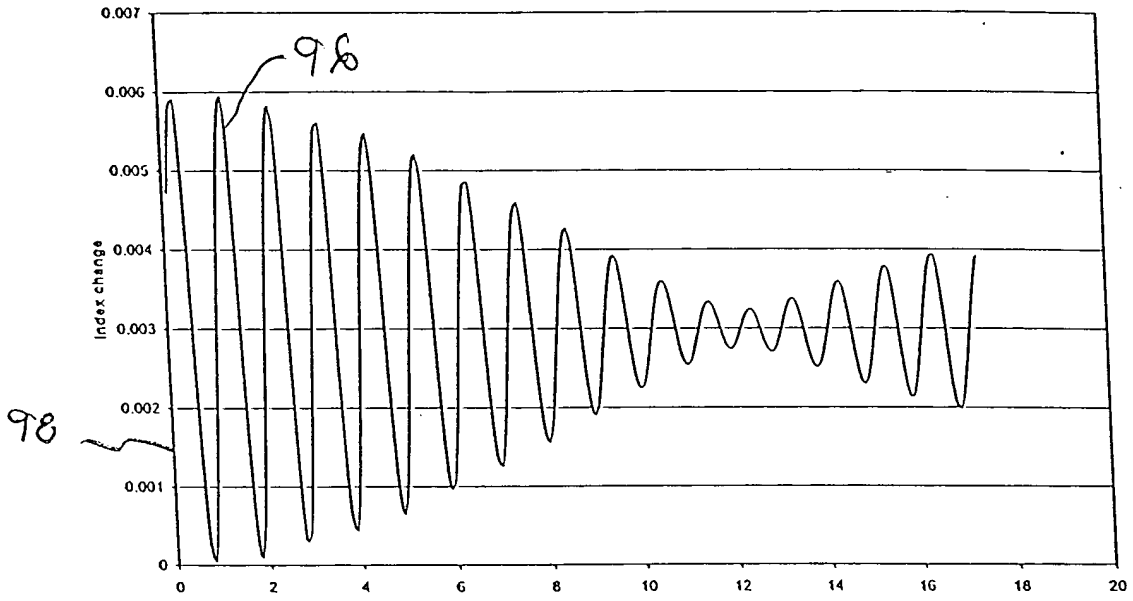


Fig. 10

cc-0653

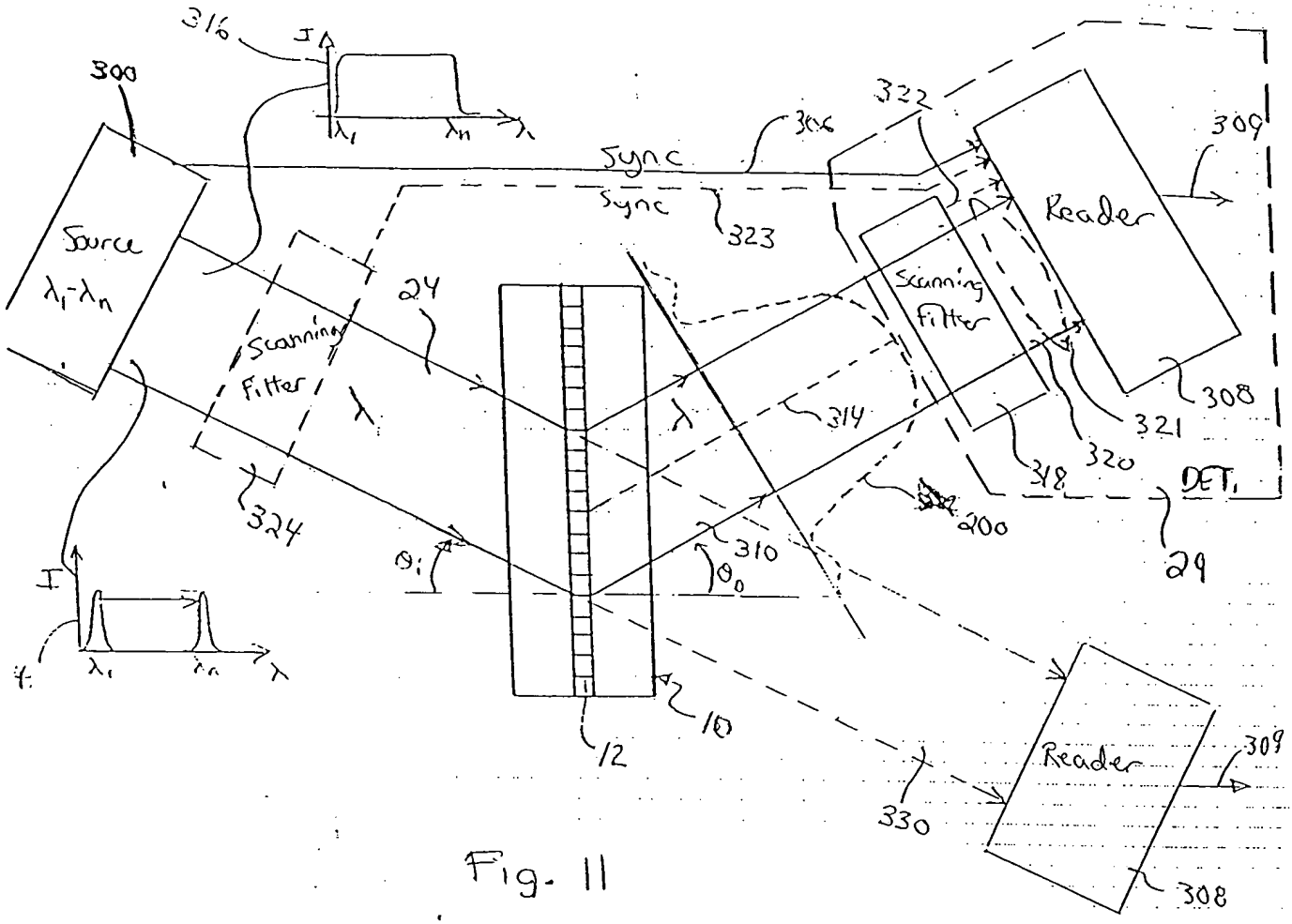


Fig. 11

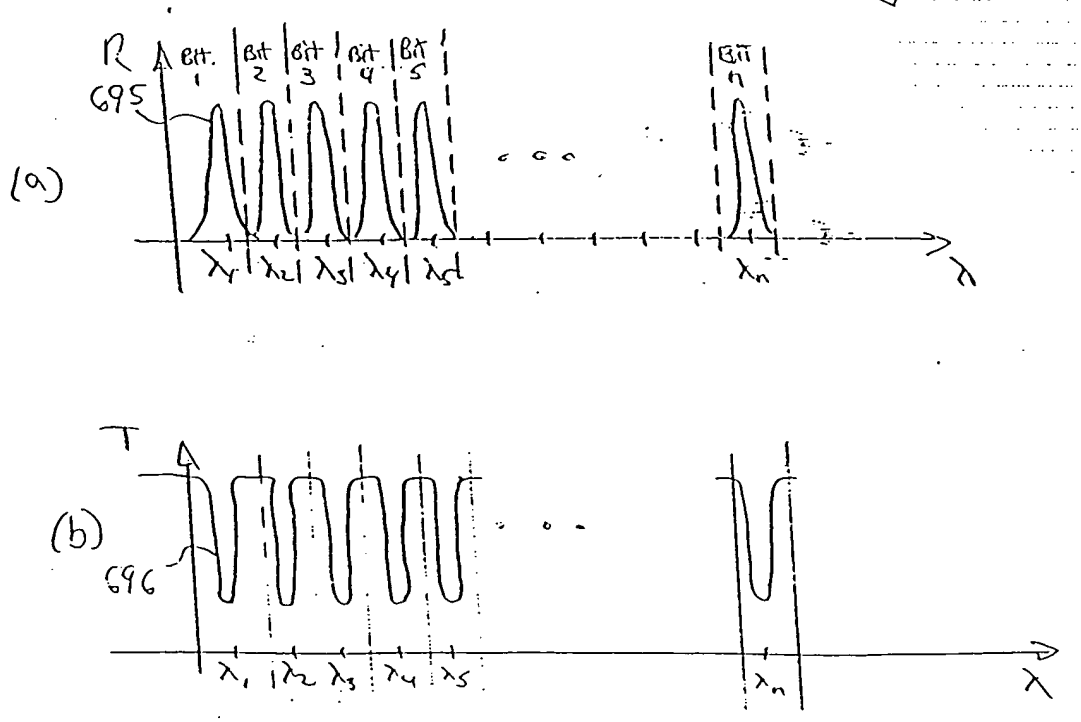


Fig. 12

CC-0653

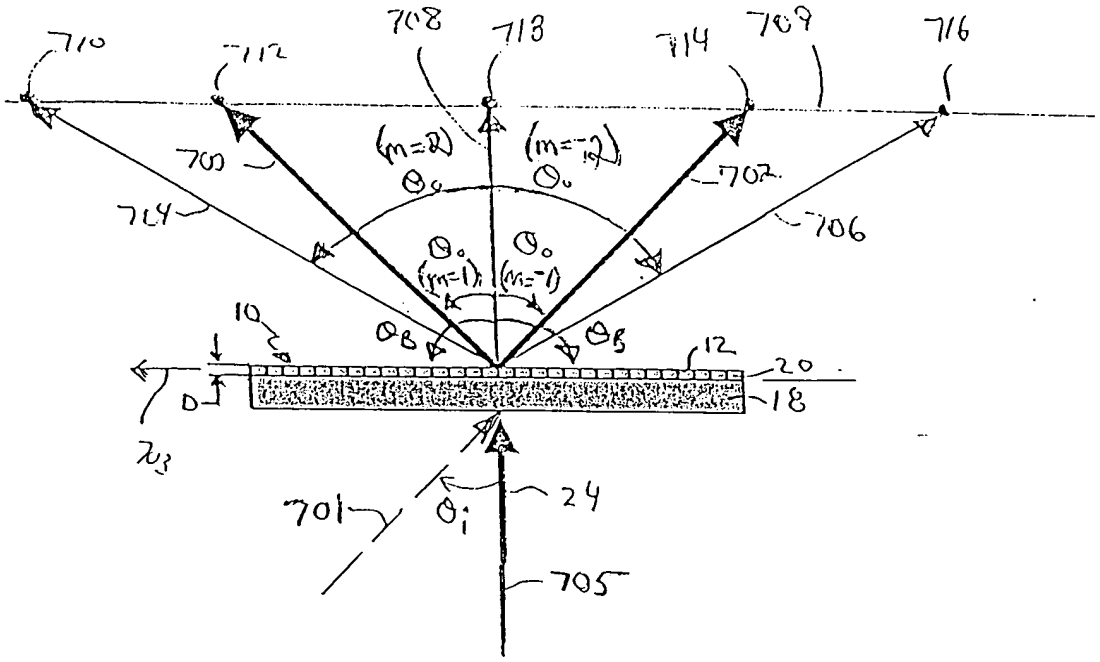
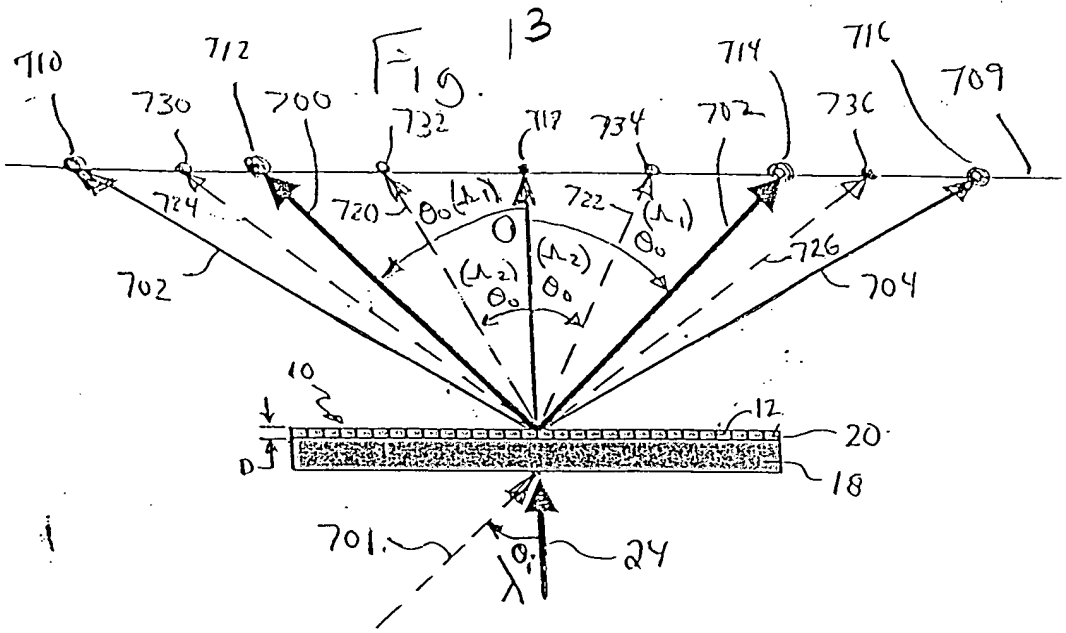


Fig. 13



CC-0653

Fig. 14

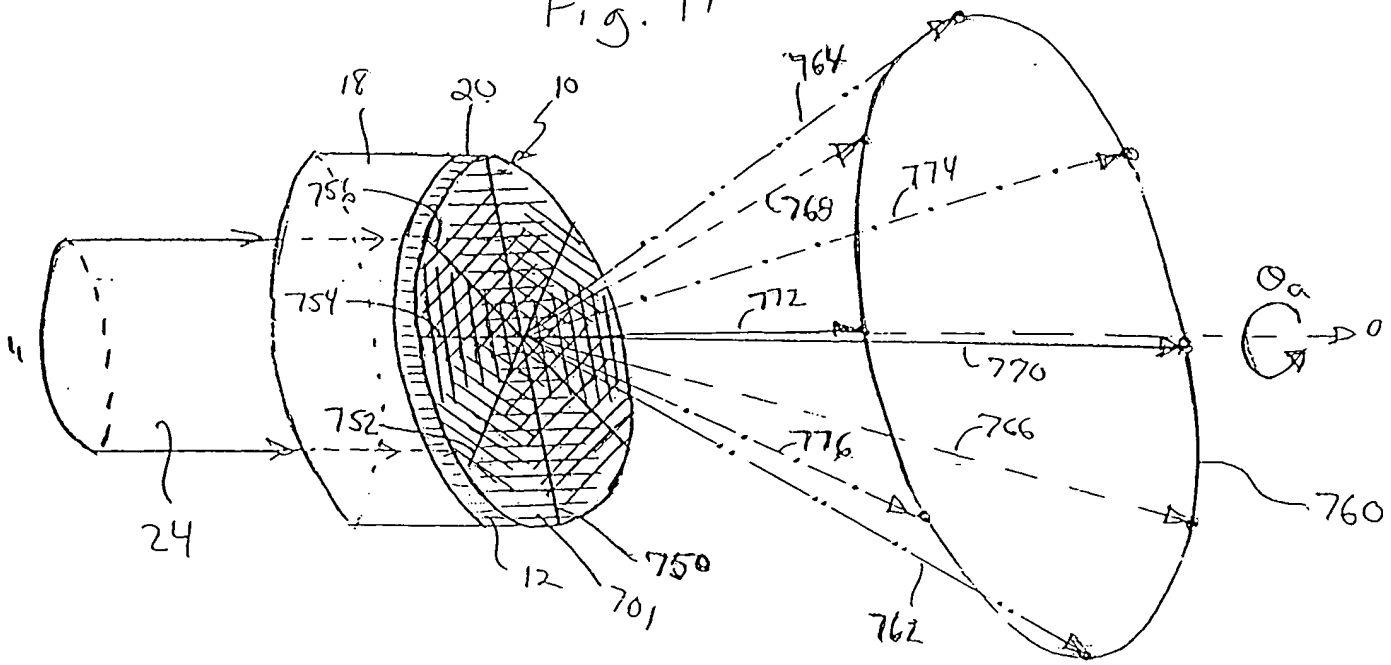
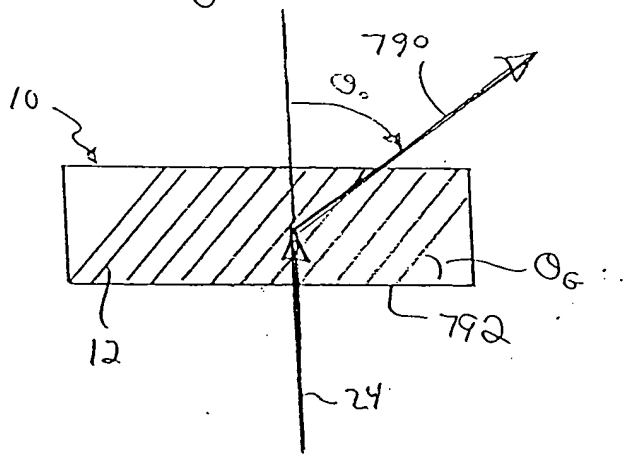


Fig. 15



CC-0653

Fig. 16

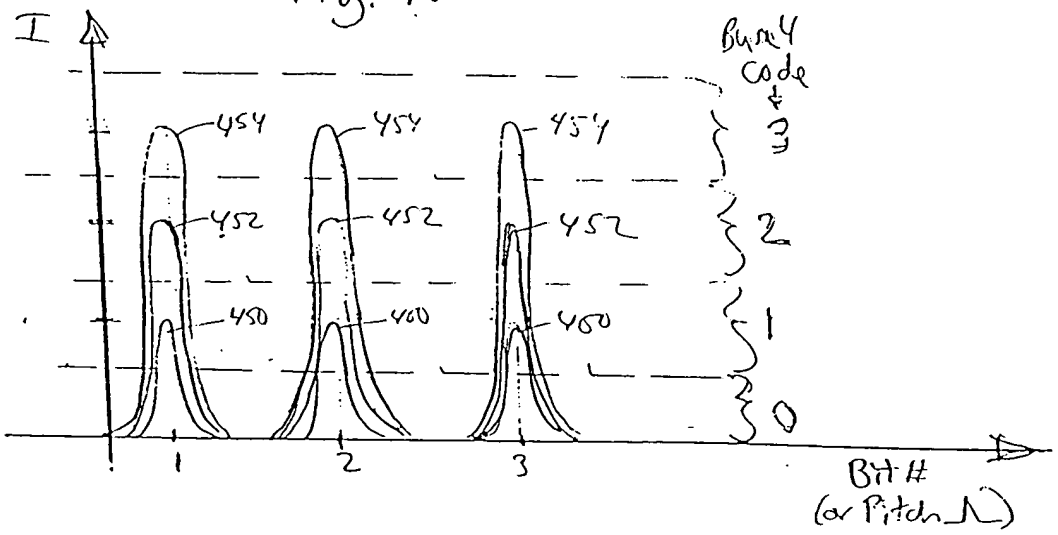


Fig. 17

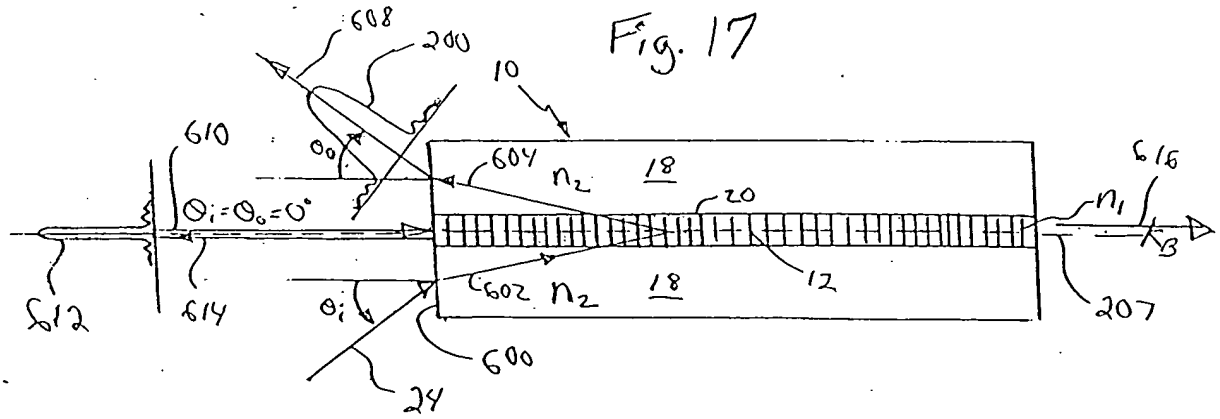
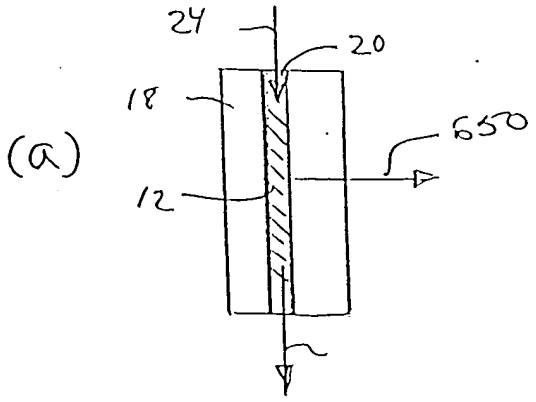
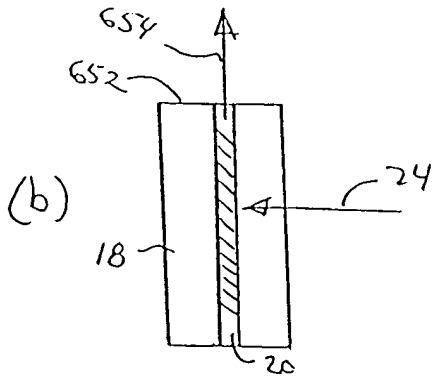


Fig. 20

CC-0653





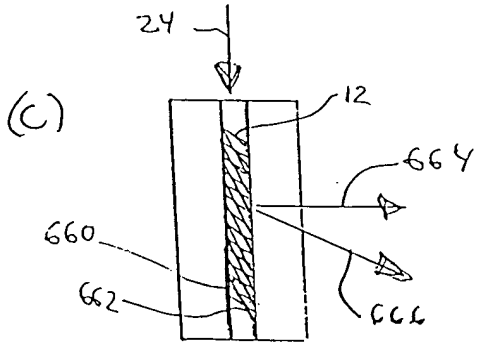


Fig. 18

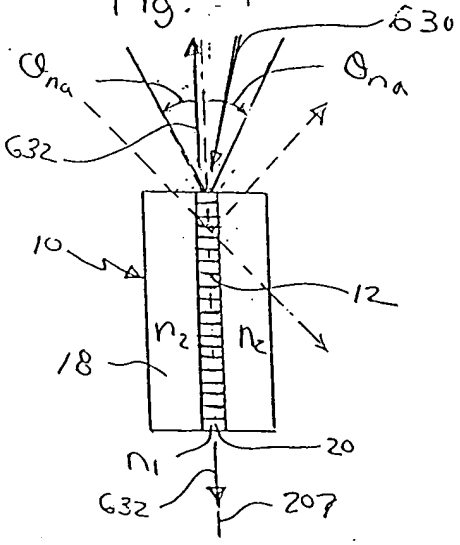
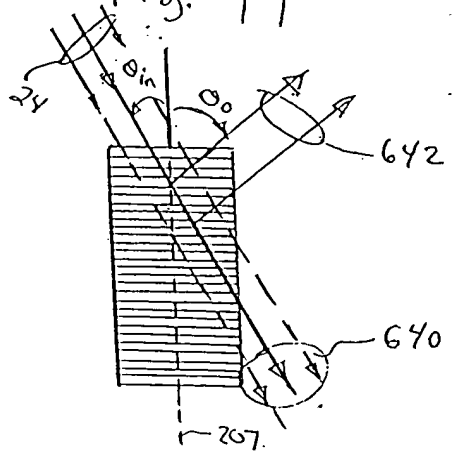
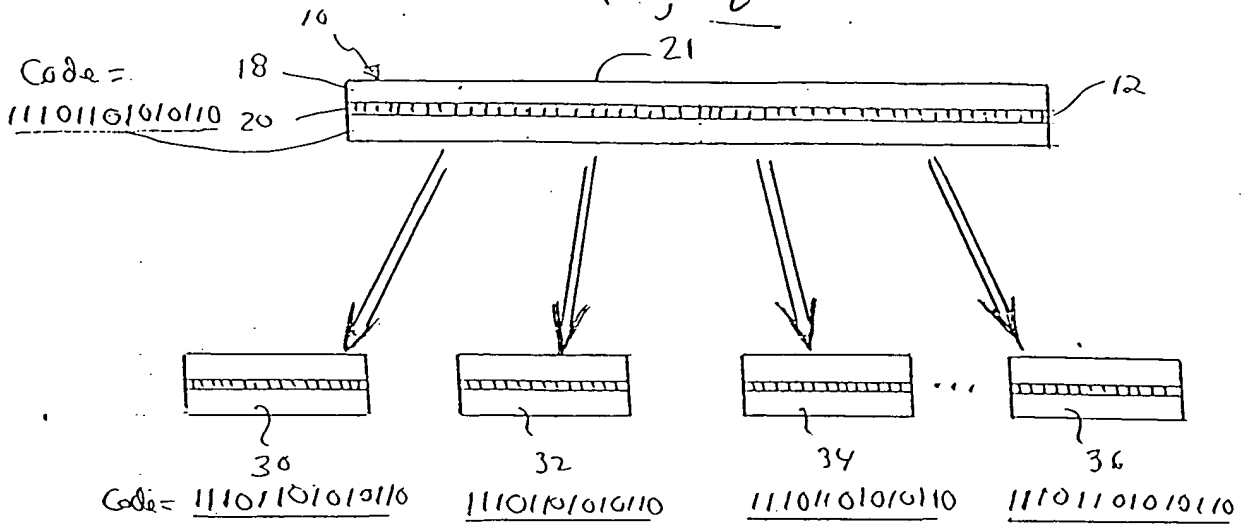


Fig. 19



CC-0655

Fig. 22



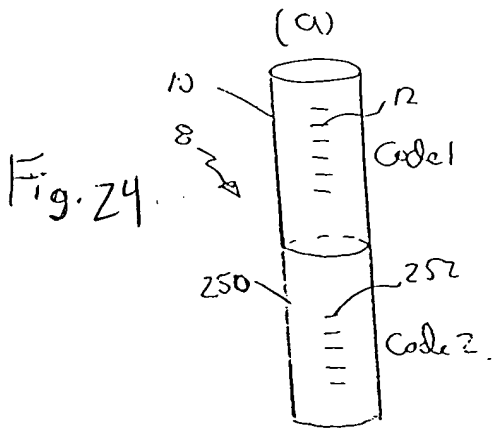
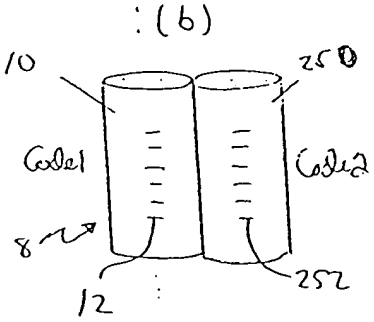
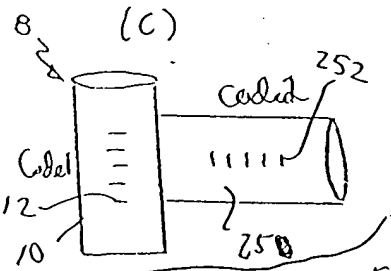
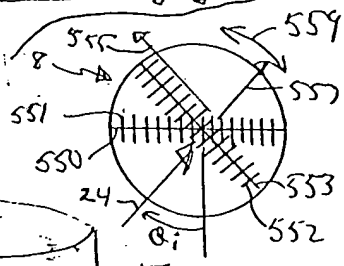


Fig. 24







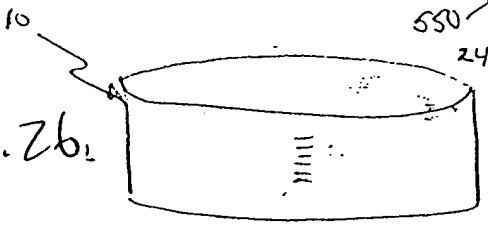
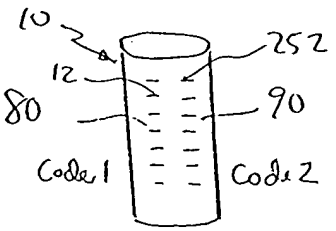


Fig. 26

Fig. 27



(a)

Fig. 25

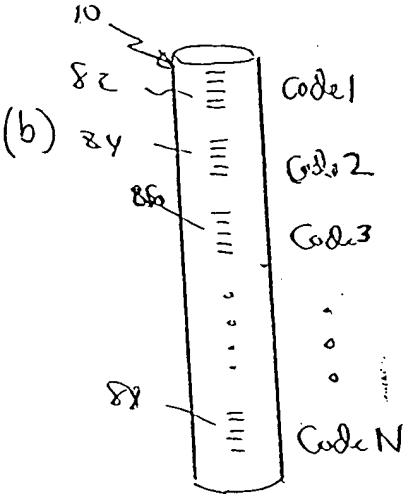


Fig. 21

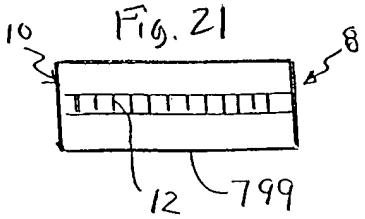


Fig. 23

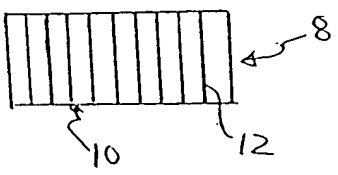


Fig. 28

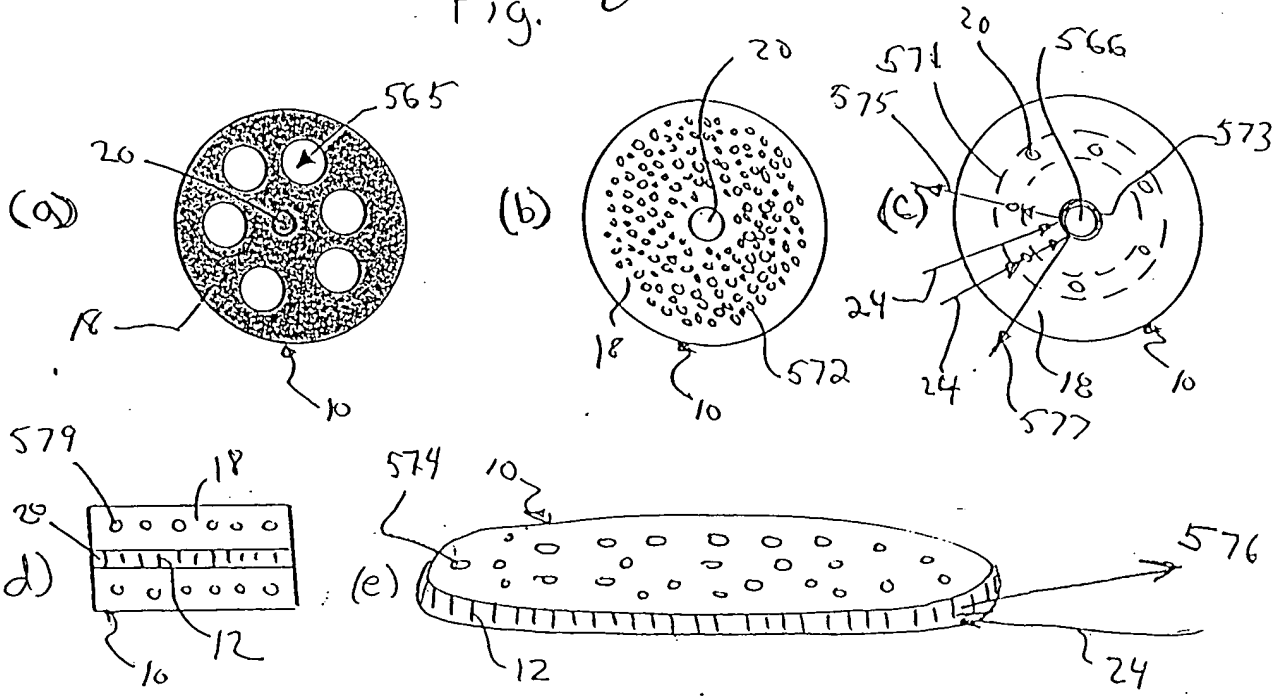


Fig. 29

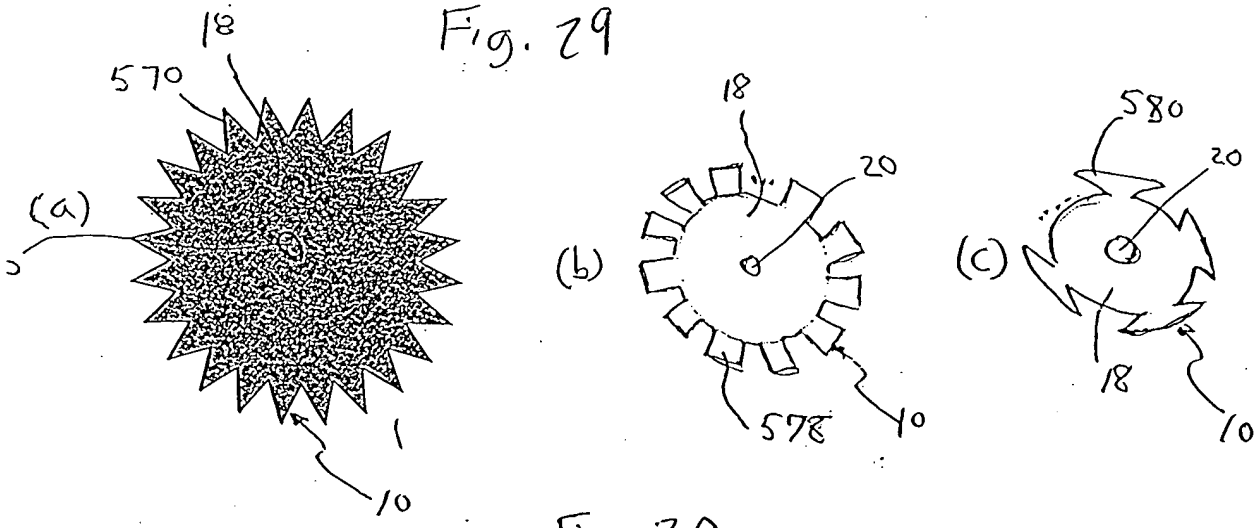
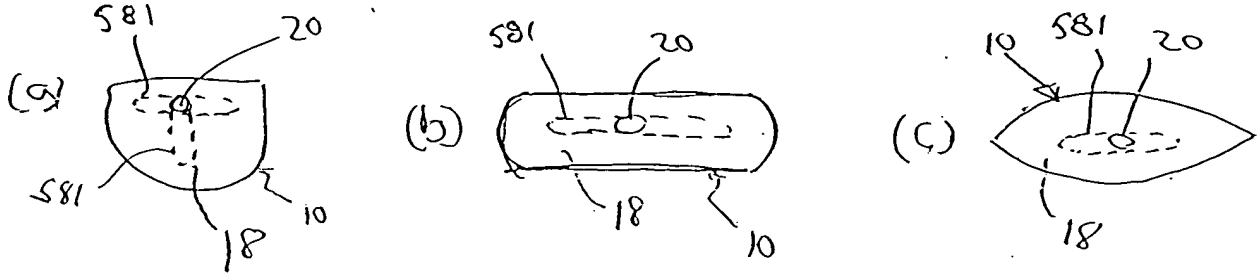


Fig. 30



CC-0653

Fig. 31

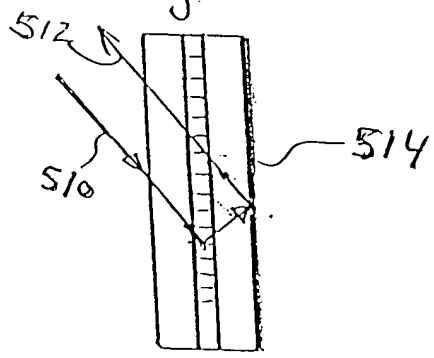
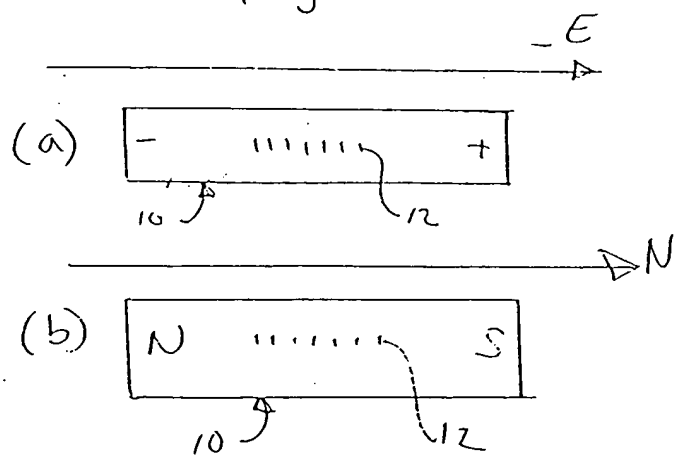



Fig. 32